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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/702,441	11/07/2003	Gaelle Brun	05725.1257-00	9409
22852	7590	10/13/2010		
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER CHANNAVAJJALA, LAKSHMI SARADA	
			ART UNIT	PAPER NUMBER
			1611	
			MAIL DATE	DELIVERY MODE
			10/13/2010 PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/702,441

Applicant(s)

BRUN ET AL.

Examiner

Lakshmi S. Channavajjala

Art Unit

1611

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 30 July 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11, 12, 14, 15 and 18-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11, 12, 14, 15 and 18-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Receipt of amendment and response dated 7-30-10 is acknowledged.

Claims 10-13 and 16-17 have been canceled.

Claims 1-9, 11-12, 14-15 and 18-34 are pending in the instant application.

In response to the amendment, the following rejection of record has been withdrawn:

Claims 1-9, 11-15 and 17-34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

Claims 1-4, 11-15 and 17-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Upon careful consideration, the following rejections of record have been withdrawn:

Claims 1-9, 11-15 and 17-23, 27 and 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshikazu Takata (Macromolecular rapid Commun. 1997, submitted on PTO-1449) in view of WO 99/43667 (WO 99) or WO 98/47995 (WO 98), and further in view US 5362486 to Nandagiri et al.

Claims 1-9, 11-15 and 17-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,156,077 to Shibata et al and Yoshikazu Takata (Macromolecular rapid Commun. 1997, submitted on PTO-1449) in view of US 5362486 to Nandagiri et al.

Upon further search, the following new rejection has been applied:

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-9, 11-12, 14-15 and 18-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshikazu Takata (Macromolecular rapid Commun. 1997, submitted on PTO-1449) in view of US 5362486 to Nandagiri et al and JP 2001158724 (JP 724, submitted on PTO-1449, a full translation attached to the action dated 9-16-08) **OR** Nandagiri et al and Takata in view of JP 274 **OR** JP 274 and Takata in view of Nandagiri et al.

Takata teaches cyclic carbonates that are expandable monomers on polymerization, by single ring-open polymerization (lines bridging pages 461-462). Takata teaches various six and seven-member cyclic carbonates. A list of the polymers have been described in Table 1, table 3 and Figure 2., of which the compounds in Figure 2 include 6-7 member rings of cyclic carbonates, which meet the description for the instant cyclic carbonates, where $n=0$ and $R_2=O$, $x=O$ and $z=C_4$ alkylene of claim 1 and item vi of claim 13. Takata does not teach cosmetic compositions or the instant claimed method of treating hair, skin or nails.

Nandagiri teaches hair treating compositions comprising one or more oligomer that are polymerized in situ for in creased hair body to hair; provides better and continuous polymer films and on to hair, and also protects and strengthens hair (abstract; col. 1-2). According to Nandagiri, film-forming polymers are used to provide a

flexible sheath of polymeric film on the shaped hair after drying and therefore for mechanical reasons retard the return of each individual hair to its original shape (col. 2, L 3-23). According to Nandagiri, in *in-situ* polymerization is better than applying polymers to hair and the monomers that polymerize *in situ* should not be irritating and harmful to skin (col. 2, L 35-67). Nandagiri teaches aqueous-alcoholic compositions comprising such monomers in the form of mousse, lotion, milk etc (col.4). Nandagiri also suggests monomers activated by heat or light (col. 7-8) as being suitable. In addition to the monomers, Nandagiri teaches reducing agents such as sulfites, bisulfites, persulfates etc (col. 9, l 1-12), azo compounds (col. 9, l 13-15), polysiloxane and other conditioners (col. 10-11), cosmetic additives such as thickeners, surfactants, dyes, softeners, pearlescent agents, fragrances etc (col. 12-14) and the composition may be in the form of hair spray.

JP 724 teaches a hair dye composition comprising a 1,3-dioxolan-2-one derivative (which is a cyclic carbonate) in combination with an acidic dye and a water soluble polymer (abstract). The cyclic carbonate described in formula 2 recites variable R, which is $-(OR_2)_n-OR_1$ or $-(OR_2)_nOCOR_1$, where R_1 is an integer of 0-30 and R_2 is an alkylene group of C-4 carbons. For the claimed additional compounds (claims 20-34), JP 724 teaches polymer (0020), wetting agents (0028), solubilizing agents, pH adjusting agents, dyes (0010) and in amounts that are within the claimed amounts ((0021). While JP does not teach the exactly claimed compounds, the cyclic carbonates of JP 274 are related to cyclic carbonates of Takata and hence one of an ordinary skill in the art would have expected the compounds of Takata to possess similar properties

such as that taught by JP 274 i.e., increase the affinity of hair dye to keratin fibers (the limitation of instant claim 9) and safe on application to hair and skin. In addition, the compounds of Takata also possess the properties of being able to polymerize in situ.

Therefore, it would have been obvious for one of an ordinary skill in the art at the time of the instant invention was made to employ the cyclic carbonate compounds taught by Takata, in cosmetic or personal care compositions such as hair dye compositions for treating hair because while Takata teaches cyclic carbonates for their efficiency in becoming expandable upon polymerization and suggests a possible role in cosmetic for treating skin and hair, Nandagiri suggests that monomeric compounds that are capable of polymerizing in situ impart body, volume and strength to hair without returning to the original shape of the hair. Further, Nandagiri also teaches incorporating additional cosmetic ingredients in compositions comprising such in situ polymerizable compounds. A skilled artisan would have expected the compounds of Takata to improve the affinity of dyes to hair (JP 274) as well as impart body, volume, fullness and strength to the hair (owing to their ability to polymerize in vitro). A skilled artisan would have employed appropriate amounts of the compounds of Takata with an expectation to achieve the desired hair dye affinity and hair strengthening effect. Alternatively, it would have been obvious for one of an ordinary skill in the art at the time of the instant invention was made to modify the hair compositions of Nandagiri or JP 274 by employing the cyclic carbonate compounds taught by Takata because of Nandagiri desires compounds that are capable of polymerizing in situ impart body, volume and strength to hair without returning to the original shape of the hair and JP 274 teaches

that cyclic carbonate compounds increase the affinity of hair dyes to the hair. Similar properties may normally be presumed when compounds are very close in structure. Dillon, 919 F.2d at 693, 696, 16 USPQ2d at 1901, 1904. See also In re Grabiak, 769 F.2d 729, 731, 226 USPQ 870, 871 (Fed. Cir. 1985).

Claims 1-9, 11-12, 14-15 and 18-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,156,077 to Shibata et al in view of Yoshikazu Takata (Macromolecular rapid Commun. 1997, submitted on PTO-1449), 5362486 to Nandagiri et al and JP 2001158724 (JP 724, submitted on PTO-1449, a full translation attached to the action dated 9-16-08).

Shibata teaches a hair composition comprising an oxyalkylenated xanthan gum, a film forming polymer, a reducing agent and an oxidation dye (paragraph bridging col. 1-2). Shibata teaches oxidation dyes and reducing agents in col. 5-6. Shibata teaches inclusion of film formers in hair compositions in col. 7-8. Shibata fails to teach the instant cyclic carbonates. The amounts of each of the components taught by Takata are within the claimed ranges.

The teachings of Takata, Nandagiri and JP 274 have been discussed above. Therefore, it would have been obvious for one of an ordinary skill in the art at the time of the instant invention was made to employ the cyclic carbonate compounds taught by Takata, in hair care compositions of Shibata as film forming polymers because Nandagiri teaches the advantages of monomers polymerizing in situ over applying film-

forming polymers such as impart body, volume and strength to hair without returning to the original shape of the hair. Further, a skilled artisan would have expected that the compositions of Takata would increase the affinity of hair dyes of Shibata because JP 274 teaches the related cyclic carbonate compounds having improved affinity of hair dyes to the hair fibers. A skilled artisan would have employed appropriate amounts of the compounds of Takata with an expectation improve hair volume, hair strengthening effect and also not observe any irritation with the compounds of Takata. Similar properties may normally be presumed when compounds are very close in structure. Dillon, 919 F.2d at 693, 696, 16 USPQ2d at 1901, 1904. See also In re Grabiak, 769 F.2d 729, 731, 226 USPQ 870, 871 (Fed. Cir. 1985).

Response to Arguments

Applicant's arguments filed 7-30-10 have been fully considered but they are not persuasive. Applicants' arguments with respect to the teachings of WO 99/43667 (WO 99) or WO 98/47995 (WO 98) are moot because the new rejection no longer relies on the above references. Applicants argue that Takata fails to teach the claimed cyclic carbonates for cosmetic applications and Nandagiri teaches that the polymerization of monomers in-situ is highly unpredictable and inconsistent due to their irritant and harmful property to skin and hair. It is argued that Nandagiri as a whole does not provide motivation as to which monomers can be used for the treatment. It is argued that Shibata fails to teach the claimed carbonates.

In response to applicant's argument that there is no teaching, suggestion, or motivation to combine the references, the examiner recognizes that obviousness may be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), and *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007). Applicant's arguments are not persuasive because the newly cited reference (JP 274) teaches cyclic carbonate compounds and their utility in hair care compositions. The cyclic carbonates of Takata and those of JP 274 are structurally related compounds and similar properties may normally be presumed when compounds are very close in structure. *Dillon*, 919 F.2d at 693, 696, 16 USPQ2d at 1901, 1904. See also *In re Grabiak*, 769 F.2d 729, 731, 226 USPQ 870, 871 (Fed. Cir. 1985). Therefore, a skilled artisan would have employed the compounds of Takata in hair compositions suggested by JP 274 with an expectation to provide higher affinity of hair dye to keratin. Further, while Nandagiri teaches that the previous attempts to polymerize monomers in situ were unsuccessful and were harmful, JP 274 teaches that the cyclic carbonate compounds are safe to use on hair and skin. Accordingly, a skilled artisan would have expected that that in-situ polymerizable cyclic carbonates of Takata would be safe for skin and hair when employed hair compositions. Applicants' argument that Shibata fails to teach instant cyclic carbonates is not persuasive because Shibata has not been cited for the

claimed compounds and instead Takata teaches the compounds. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lakshmi S. Channavajjala whose telephone number is 571-272-0591. The examiner can normally be reached on 9.00 AM -5.30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sharmila G. Landau can be reached on 571-272-0614. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lakshmi S Channavajjala/
Primary Examiner, Art Unit 1611
October 6, 2010